WHAT IS CLAIMED IS:

1. A magnetic-tape recording apparatus for recording digital image data into a track on a magnetic tape by a rotating head, comprising:

inputting means for inputting the digital image data;

extracting means for extracting digital image data for variable-speed reading, from the digital image data input by the inputting means; and

recording means for recording digital image data extracted by the extracting means into only a first area positioned at almost the center of the track, or recording the digital image data in a distribution manner into the first area and a second area to be traced during variable-speed reading, positioned in a track located in the vicinity of the track which includes the first area.

2. A magnetic-tape recording apparatus according to Claim 1, wherein digital image data recorded into the first area is digital image data read in common in variable-speed reading in the positive direction and in variable-speed reading in the reverse direction.

3. A magnetic-tape recording apparatus according to Claim 1, wherein the recording means sets a predetermined

number of tracks to one group, and records the digital image
data extracted by the extracting means into each of the
first area and the second area according to a predetermined
pattern in each group.

4. A magnetic-tape recording apparatus according to
Claim 1, wherein the recording means records the digital
image data extracted by the extracting means into the
magnetic tape by a rotating head having an azimuth which is
determined to have a recording magnetization direction close
to the arrangement direction of a magnetic material applied
to the magnetic tape.

5. A magnetic-tape recording apparatus according to
Claim 1, wherein, when the digital image data extracted by
the extracting means is recorded into tracks having both
azimuths, the recording means records digital image data for
a larger-times-faster reading into a track with an azimuth
having a recording magnetization direction closer to the
arrangement direction of a magnetic material applied to the
magnetic tape, and records digital image data for a smaller-
times-faster reading into the other track.

6. A magnetic-tape recording apparatus according to
Claim 1, wherein the recording means generates digital image

data for n-times-faster reading, and arranges and records

the digital image data at almost the center of each track at

an interval of n tracks or 2n tracks, where n is a power of

2, and the arranged digital image data is used during m-

times-faster variable-speed reading in the positive

direction and in the reverse direction, where m is a power

of 2, and during normal-speed reading in the reverse

direction.

7.   A magnetic-tape recording apparatus according to

Claim 6, wherein n and m satisfy the relationship of m < n.

8.   A magnetic-tape recording apparatus according to

Claim 1, wherein the recording means records digital image

data to be recorded into each of the first area and the

second area, into each area a plurality of times.

9.   A magnetic-tape recording apparatus according to

Claim 8, wherein the digital image data is formed of a sync

block having a predetermined length; and

the recording means records the digital image data into

each area the plurality of times, with an area corresponding

to (L - N) sync blocks being disposed between the data,

where N indicates the number of sync blocks to be recorded

into the first area or the second area, and L indicates the

number of sync blocks which can be captured in the first area and the second area.

10. A magnetic-tape recording apparatus according to Claim 9, wherein the recording means specifies one location as a trace target of phase lock servo, arranges the digital image data at the location and at locations positioned therebefore and thereafter where data can be captured, and records the same digital image data the plurality of times such that the value of (L - N) becomes larger as the head is farther from the trace target.

11. A magnetic-tape recording method for a magnetic-tape recording apparatus for recording digital image data into a track on a magnetic tape by a rotating head, comprising:

an input control step of controlling the input of the digital image data;

an extracting step of extracting digital image data for variable-speed reading, from the digital image data input by a process in the input control step; and

a recording control step for controlling such that digital image data extracted by the process in the extracting step is recorded into only a first area positioned at almost the center of the track, or the digital

image data is recorded in a distribution manner into the first area and a second area to be traced during variable-speed reading, positioned in a track located in the vicinity of the track which includes the first area.

12. A recording medium storing a computer-readable program for a magnetic-tape recording apparatus for recording digital image data into a track on a magnetic tape by a rotating head, the program comprising:

an input control step of controlling the input of the digital image data;

an extracting step of extracting digital image data for variable-speed reading, from the digital image data input by a process in the input control step; and

a recording control step for controlling such that digital image data extracted by the process in the extracting step is recorded into only a first area positioned at almost the center of the track, or the digital image data is recorded in a distribution manner into the first area and a second area to be traced during variable-speed reading, positioned in a track located in the vicinity of the track which includes the first area.

13. A magnetic tape, wherein digital image data for variable-speed reading is recorded into a first area

positioned at almost the center of a track, or the digital image data is recorded in a distribution manner into the first area and a second area to be traced during variable-speed reading, positioned in a track located in the vicinity of the track which includes the first area.